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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,309	12/31/2003	Christopher M. Bailey	M02A231	9707

7590 10/17/2006

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EXAMINER	
FREAY, CHARLES GRANT	
ART UNIT	**PAPER NUMBER**
3746	

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/750,309	BAILEY ET AL.	
	Examiner	Art Unit	
	Charles G. Freay	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-26 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-26 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 12/2003.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims, 1, 5-7, 11 and 13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Powell (USPN 4,725,204).

Powell discloses a vacuum exhaust apparatus having a sub-atmospheric chamber (12), a plurality of high vacuum pump (14) connected to plural process vacuum chambers (Reactors #1-#3), a throttle valve (V2) connected at the outlet of the pumps, a single outlet (18) from the sub-atmospheric chamber, the outlet connected to a backing pump (10) and the outlet from the backing pump flowing to a scrubber (32). As set forth at col. 1 lines 33-42 the sub-atmospheric chamber eliminates pressure surges in the process vacuum chambers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell.

As set forth above Powell discloses the invention substantially as claimed including plural process vacuum chambers. In the illustrated embodiment Powell shows three chambers. Powell does not disclose four process vacuum chambers. At the time of the invention it would have been obvious to one of ordinary skill in the art that additional vacuum chambers, such as one more to make the total four, could have been connected to the sub-atmospheric chamber in order to provide additional manufacturing capability.

Claims 2-4, 17, 19-21 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powel in view of Moore et al (USPN 6,635,228).

As set forth above Powel discloses the invention substantially as claimed. Powell does not disclose that the sub-atmospheric chamber includes an abatement device. Moore et al teach at least two vacuum process chambers containing dissimilar gasses

(col. 18 lines 27-32), the chamber being an abatement chamber (12) which conditions the different gasses from the process vacuum chambers differently so that the gases can be made compatible for mixing the abatement device being selected from a group of devices including plasma ionization devices. At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the dissimilar gas set up of Moore et al with the vacuum system of Powell for the benefit of precluding problems with mixing incompatible gases.

Claims 8-10, 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Yamazaki et al (4,636,401).

As set forth above Powell discloses a vacuum exhaust apparatus substantially as claimed. Powell does not disclose that the high-vacuum pumps are turbo pumps capable of exhausting to a pressure over 5 torr. However, Yamazaki et al teach a pump which is a turbo pump (87) exhausting a process chamber. The turbo pump is capable of exhausting to a pressure over 5 torr and there is a throttle valve at the exhaust of the turbo pump. It would have been obvious to one of ordinary skill in the art to replace the blower (14) of Powell with the pump and valve of Yamazaki et al for the benefit of preventing contamination of an element in the process chamber (col. 4 lines 13-35).

Claims 18 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Moore et al and further in view of Yamazaki et al (4,636,401).

As set forth above Powell in view of Moore et al discloses a vacuum exhaust apparatus substantially as claimed. Powell does not disclose that the high-vacuum pumps are turbo pumps capable of exhausting to a pressure over 5 torr. However, Yamazaki et al teach a pump which is a turbo pump (87) exhausting a process chamber. The turbo pump is capable of exhausting to a pressure over 5 torr and there is a throttle valve at the exhaust of the turbo pump. It would have been obvious to one of ordinary skill in the art to replace the blower (14) of Powell with the pump and valve of Yamazaki et al for the benefit of preventing contamination of an element in the process chamber (col. 4 lines 13-35).

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powel in view of Moore et al as applied to claim 21 above and further in view of Olander et al (US 2005/0039425).

As set forth above Powell in view of Moore et al discloses the invention substantially as claimed but does not disclose that the vacuum process chambers are located within a clean room and the sub-atmospheric chamber is located outside the clean room. Olander et al discloses locating the processing chambers within a clean room (abstract) and an abatement chamber located outside the clean room (para. 0046). At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the clean room and abatement arrangement of Olander et al with the vacuum apparatus of Powell in view of Moore et al for the benefit of an economically beneficial system (para. 0026).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-26 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims, 1 and 4-25 of U.S. Patent No. 7,021,903. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant invention are broader than the claims set forth in the Patent. More specifically the claims of the patent include the additional limitation of the abatement device being capable of handling different gasses and then mixing the gasses. Therefore, an artisan making the invention set forth in the Patent would also be making the invention set forth in the instant application should the application issue as a patent. At the time of the invention it would have been obvious to

one of ordinary skill in the to use an abatement device which handles vacuum chambers having the same gas in order to simplify the system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles G. Freay whose telephone number is 571-272-4827. The examiner can normally be reached on Monday through Friday 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Charles G Freay
Primary Examiner
Art Unit 3746

CGF